

Scope and Sequence AP Research

Course Title	AP Research
Course Overview	AP Research, the second course in the AP Capstone experience, allows students to deeply explore an academic topic, problem, issue, or idea of individual interest. Students design, plan, and implement a yearlong investigation to address a research question. Through this inquiry, they further the skills they acquired in the AP Seminar course by learning research methodology, employing ethical research practices, and accessing, analyzing, and synthesizing information. Students reflect on their skill development, document their processes, and curate the artifacts of their scholarly work through a process and reflection portfolio. The course culminates in an academic paper of 4,000–5,000 words (accompanied by a performance, exhibit, or product where applicable) and a presentation with an oral defense.
Course Essential Questions	Big Idea 1: Question and Explore ESSENTIAL QUESTIONS • What do I want to know, learn, or understand? • What questions have yet to be asked? • How does my research question shape how I go about trying to answer it? • How does my project goal shape the research or inquiry I engage in to achieve it? • What information/evidence do I need to answer my research question? Big Idea 2: Understand and Analyze ESSENTIAL QUESTIONS • What strategies will help me comprehend a text? • What is the main idea of the argument or artistic work and what reasoning does the author use to develop it? • What biases may the author have that influence his or her perspective? • Does this argument acknowledge other perspectives? • How can I assess the quality or strength of others' research, products, or artistic works? Big Idea 3: Evaluate Multiple Perspectives ESSENTIAL QUESTIONS • How might others see a problem or issue differently? • What patterns or trends can be identified among the arguments about this issue? • What are the implications and/or consequences of accepting or rejecting a particular argument? • How can I connect the multiple arguments? What other issues, questions, or topics do they relate to? • How can I explain contradictions within or between arguments? • From whose perspective is this information being presented, and how does that affect my evaluation? Big Idea 4: Synthesize Ideas ESSENTIAL QUESTIONS • How do I connect and analyze the evidence in order to develop an argument and support a conclusion? • Are there other conclusions I should consider? • How does my scholarly work emerge from my perspective, design choices, or aesthetic rationale? • How do I acknowledge and account for my own biases and assumptions? • What is the most appropriate way to acknowledge and attribute the work of others that was used to support my argument? How do I ensure the conclusions I present are my own?

Big Idea 5: Team, Transform, and Transmit
ESSENTIAL QUESTIONS

- How can I best appeal to and engage my audience?
- What is the best medium or genre through which to reach my audience?
- How might I adapt my written and oral presentations for different audiences and situations?
- How might my communication choices affect my credibility with my audience?
- Which revision strategies are most appropriate to developing and refining my project at different stages?
- How do I provide feedback that is valuable to others? How do I act upon feedback I have received?
- How can I benefit from reflecting on my own work?

	September - October	November-December	December-February
Unit Title and Core Text	<u>Finding the Gap / Body of Knowledge</u> <u>AP Research 2017 Student Workbook</u> • <i>AP Research Course and Exam Description</i> • Booth, W. C., Colomb, G. G., & Williams, J. M. (2008). <i>The Craft of Research</i>. Chicago: University of Chicago Press. • Graff, G., & Birkenstein, C. (2010). <i>They say / I say: The moves that matter in academic writing</i>: Norton. • Greene, S., & Lidinsky, A. (2016). <i>From Inquiry to Academic Writing: A Text and Reader</i>. Bedford/St. Martin's.	<u>Proposal</u> <u>AP Research 2017 Student Workbook</u> • <i>AP Research Course and Exam Description</i> • Booth, W. C., Colomb, G. G., & Williams, J. M. (2008). <i>The Craft of Research</i>. Chicago: University of Chicago Press. • Graff, G., & Birkenstein, C. (2010). <i>They say / I say: The moves that matter in academic writing</i>: Norton. • Greene, S., & Lidinsky, A. (2016). <i>From Inquiry to Academic Writing: A Text and Reader</i>. Bedford/St. Martin's.	<u>Results & Analysis</u> • <i>AP Research Course and Exam Description</i> • Booth, W. C., Colomb, G. G., & Williams, J. M. (2008). <i>The Craft of Research</i>. Chicago: University of Chicago Press. • Graff, G., & Birkenstein, C. (2010). <i>They say / I say: The moves that matter in academic writing</i>: Norton. • Greene, S., & Lidinsky, A. (2016). <i>From Inquiry to Academic Writing: A Text and Reader</i>. Bedford/St. Martin's.
#Days	45 days	25 days	25 days
Unit Purpose	This unit is designed to introduce students to capital "R" research and differentiate it from their work in AP Seminar. Students begin to explore the type of researcher they are, what research interests they have, and start to learn how to go about their investigation. This includes: writing	This unit is designed to: • Study and present the various designs and methods accepted in the larger research community. • Engage in Safe and Ethical research practices	This unit is designed to: • To gather data for an academic inquiry • To analyze qualitative and quantitative data • To interpret findings from data analysis

	focused research questions, situating their inquiry within a body of knowledge, finding the gap in their chosen research area, and proposing a method of inquiry.	• Compose a Proposal for an Academic Inquiry	
Unit EQ or Big Idea	• How does my background influence my research question? • How do different disciplines communicate in the research field? • How does my project goal shape the research or inquiry I engage in to achieve it? • How can I create a feasible research project from my current research question? • How do I identify sources that will support my understanding of the BOK? • How do I join my discipline in the QUEST for knowledge? • Does this argument acknowledge other perspectives? • How does my scholarly work emerge from my perspective, design choices, or aesthetic rationale? • How can I best appeal to and engage my audience?	• How does my research question shape how I go about trying to answer it? • How do I keep my study ethical and valid while conducting research and/or gathering data?	• How does your discipline treat each of the additional components to the academic paper? • How do you plan to use quantitative techniques to communicate your findings to your audience? • What makes this technique the best fit for your data?
Formative Assessments	Workbook Lessons: 1, 2, 3 PREP Submissions: • Problem Statement • Feasibility Worksheet • Initial Topic Approval Form PREP Reflections: • Introduction to AP Research • Developing Research Questions	Workbook Lessons: 4, 5, 6, 7, 16, 8.1, 9, 10, 11, 12, 13 PREP Submissions: • 15 Source Annotated Bibliography • 15+ Source Reference Page • Review of the Literature • Poster Project and Presentation PREP Reflections: • Annotated Bibliography Assignment	PREP Submissions: • Institutional Review Board Application (IRB) • Principal Permission Letter for an Academic Inquiry • Informed Consent Notification • Data Collection Calendar • Data Collection Journal • Falsification of Data Affidavit • Data Collection Tools

	- Collecting Sources to Situate an Inquiry - Collecting Sources for the Body of Knowledge (BOK)	- The Introduction Element in the Academic Paper - Composition of the Literature Review - Literature Review and Research Question Presentation	- Raw Data–Quantitative - Quantitative Tables, Figures - Raw Data–Qualitative - Coded Qualitative Data PREP Reflections: - Design and Method Types - Ethics and Validity in Research - The Method Element in Academic Papers - Composition of Methods, Procedures and Instruments - Composition of Research Method Element
Unit Summative Assessment	SUMMATIVE ASSESSMENT 50 Source Body of Knowledge	SUMMATIVE ASSESSMENT Proposal	SUMMATIVE ASSESSMENT Analysis and Results Sections of Final Academic Paper
Unit Priority Standards	1.1C1: Topics of inquiry may come from personal interest, passion for a discipline/field, desire to better understand a topic, or desire to address an issue in the world. 1.1D1: Scholars explore, explain, and create. 1.1D2: The purpose of scholarly inquiry is to address various kinds of problems or extend an existing idea. 1.1E1: A research question/project goal emerges from the scholar's purpose. 1.1E2: A research question/project goal often requires multiple revisions to ensure it is appropriate in terms of scope and feasibility (time, resources). 1.3A1: Information used to address a problem may come from various secondary sources and/or other primary sources.	1.4B1: Methods for data collection, analysis, innovation, and/or interpretation should be aligned with the research question/project goal. 1.4B2: Methods of inquiry may include research methods or artistic processes. 1.4B5: Based on the research question or project goal, methods of data or information collection may be qualitative; may be quantitative; or could include a combination of both qualitative and quantitative 1.4B7: Scholars identify reasons for choosing a sample of information, a population, or artifacts and understand the limits of the inferences or conclusions made based on the sample chosen. 1.4B10: Scholars can combine qualitative and quantitative data/information to triangulate and corroborate trends, patterns, correlations, and/or theme 1.4C1: Scholars carefully plan methods of inquiry, analysis, and other feasible research	1.4B6: Scholars analyze data or information in a variety of ways appropriate to the inquiry. 1.4B8: Descriptive or inferential statistics can be used to display and/or analyze data. 2.1C1: Authors use reasons to support their arguments. The line of reasoning is composed of one or more claims justified through evidence. 2.2B3: Authors strategically include evidence to support claims. 2.2B5: Evidence may be used to identify and explain relationships and/or patterns and trends. 4.1B1: Each discipline has its own conventions and ways of knowing, questioning, and communicating. 4.1B3: The different disciplines and associated ways of knowing and valuing information are discovered in part through engaging with discipline-specific

	1.3A2: Online databases and library catalogs and house secondary and some primary sources 1.3A3: Advanced search tools and keywords allow scholars to refine, focus and/or limit their searches based upon a variety of factors 1.3B1: The scope and purpose of one's research and the credibility of sources affects the generalizability and the reliability of the conclusions. 1.3B2: Credibility of evidence depends on the use of sources and data that are relevant and reliable 1.3B3: Determining the credibility of a source requires considering and evaluating multiple criteria 2.2A2: An argument's line of reasoning is organized based on the argument's purpose 2.2A3: Effective arguments acknowledge other arguments and/or respond to them with counterarguments. 2.2B1: An argument's context and situation inform its interpretation. 2.2B3: Authors strategically include evidence to support their claims. 2.2B6: Credibility is compromised when authors fail to acknowledge and/or consider the limitations of their conclusions, opposing views or perspectives, and/or their own biases. 2.2C1: Authors using reasons to support their arguments. The line of reasoning is composed of one or more claims justified through evidence. 2.1C2: A lack of understanding of the complexities of an argument can lead to oversimplification and/or generalization. 3.1A1: An individual's perspective is influenced by his or her background,	activities taking into account deadlines, priorities, risks, setbacks, and the availability of others. 1.4C2: Scholars learn that setbacks are inevitable; they need to focus on the essential goals of the inquiry or project and be prepared to try alternate approaches or look to other disciplines in order to achieve them. 1.4D1: Scholars have ethical and moral responsibilities when they conduct research. 1.4D2: There are laws, rules, and guidelines that govern the conduct of researchers, in particular when studies involve humans and animals. Accordingly, scholars gain approval to conduct research with humans through an institutional review board (IRB). 4.5A1: When making choices and proposing solutions, the advantages and disadvantages of the options should be weighed against the goal within its context. 5.1A1[R]: Inquiries result in conclusions that can be presented in different formats and that typically have the following elements: Method, process, or approach: explains and provides justification for the chosen method, process, or approach 5.1F1: Scholars effectively articulate the rationale for inquiry choices in relation to the completed work. 5.3A3: Scholars are mindful of the rationale behind the chosen method for data collection, information gathering, analysis, production, and presentation.	foundational texts and works. 1.4B8: Descriptive or inferential statistics can be used to display and/or analyze data. 5.1A1[R]: Inquiries result in conclusions that can be presented in different formats and that typically have the following elements: Results, Product, or Findings Discussion, Analysis, and/or Evaluation Conclusion and Future Directions Bibliography 5.3A1: Reflection is an ongoing and recursive process in inquiry, often leading to changes in understanding. Strategies for reflection may include journal writing, self questioning, drawing, exploration of space, and/or guided contemplation. 5.1C2: Data and other information can be presented graphically to aid audience understanding and interpretation.
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	assumptions, and worldview, as well as by external sources. 4.1A9: The same argument may be organized, arranged, or supported in multiple ways depending on audience and context. 4.1B1: Each discipline has its own conventions and ways of knowing, questioning, and communicating. 4.1B3: The different disciplines and associated ways of knowing and valuing information are discovered in part through engaging with discipline-specific foundational texts and works. 4.1B1: Each discipline has its own conventions and ways of communicating. 5.1B1: A writer expresses tone or attitude about a topic through word choice, sentence structure, and imagery. 5.1E2: Scholars present, perform, and/or produce their work in multiple ways. 4.1B4: Disciplines may be broadly or narrowly defined. Disciplines can intersect or be combined to provide new understandings or perspectives. 5.1C3: Effective communication requires choosing appropriate media according to context, purpose, and audience. 5.3A1: Reflection is an ongoing and recursive process in inquiry, often leading to changes in understanding. 5.4B1: Peer review is an effective way for scholars to strengthen their critical eye as well as strengthen their own work.		
Key Resources	• Lesson PowerPoints • Student Workbook • Google Classroom	• Lesson PowerPoints • Student Workbook • Google Classroom	• Lesson PowerPoints • Google Classroom • AP Classroom

	• AP Classroom • EBSCO Database	• AP Classroom • EBSCO Database • Student Samples	• Student Samples
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	March - April	April
Unit Title and Core Text	<u>Preparation of Final Academic Paper</u> • <i>AP Research Course and Exam Description</i> • Booth, W. C., Colomb, G. G., & Williams, J. M. (2008). <i>The Craft of Research</i>. Chicago: University of Chicago Press. • Graff, G., & Birkenstein, C. (2010). <i>They say / I say: The moves that matter in academic writing</i>: Norton. • Greene, S., & Lidinsky, A. (2016). <i>From Inquiry to Academic Writing: A Text and Reader</i>. Bedford/St. Martin's.	<u>Presentation and Oral Defense</u> • <i>AP Research Course and Exam Description</i> • Booth, W. C., Colomb, G. G., & Williams, J. M. (2008). <i>The Craft of Research</i>. Chicago: University of Chicago Press. • Graff, G., & Birkenstein, C. (2010). <i>They say / I say: The moves that matter in academic writing</i>: Norton. • Greene, S., & Lidinsky, A. (2016). <i>From Inquiry to Academic Writing: A Text and Reader</i>. Bedford/St. Martin's.
#Days	20 days	10 Days
Unit Purpose	This unit is designed to: • To compose the Discussion Section of an Academic paper • To prepare an academic paper for final submission	This unit is designed to: • To prepare a slide show presentation for an academic paper • To prepare for an Oral Defense for an Academic Inquiry
Unit EQ or Big Idea	• What were the obstacles or challenges you encountered while performing the research, and how did you address it?	• Which of your sources was the most influential, and in what ways is that influence apparent in your final

	• How might your conclusions/findings/product relate(s) to the current body of work in the community or field? • What might be the real-world implications or consequences (influences on others' behaviors, decision-making processes, or discoveries) related to your findings? • What criteria did you use to discriminate among the perspectives in order to reach a conclusion? • What additional questions emerged during your research? Based on your recent experience, what advice would you give to other researchers who might choose to investigate those questions?	conclusion or result? • Think about the initial curiosity that led to your inquiry. What other areas of inquiry might that same curiosity lead to? • Which section of Defense questions were most difficult for you to answer? Why? • How will you practice this section to ensure success during your Oral Defense? • What was the fundamental argument/idea in your research? How does this argument/idea relate to the primary purpose of your research?
Formative Assessments	Workbook Lessons: 15 PREP Submissions: • Revised Introduction Section of Proposal • Discussion Section of Academic Paper • Abstract • Appendices PREP Reflections: • Establish Final Elements of the Academic Paper • Findings Element Composition • Analysis Element Composition • Limitations and Implications • Conclusions and Future Directions • Peer Revision of Academic Paper • Final Academic Paper Revision and Edits	Workbook Lessons: 16, 17 PREP Submissions: • Slide Deck PREP Reflections: • Presentation and Oral Defense • Presentation Practice Within Cohort • Slide Deck Composition • Oral Defense Practice • Presentation Practice
Unit Summative Assessments	Final Academic Paper Uploaded to College Board	Presentation and Oral Defense
Unit Priority	1.1C3: Inquiry allows for the discovery of	1.4C3: Experts in the field may provide

Standards	connections that can increase curiosity or understanding and lead to further questions. 2.2C2: Validity is most often achieved when the presented evidence is aligned with the conclusions. The strength of an argument depends upon an author acknowledging and/or considering the limitations of his or her conclusions, opposing views or perspectives, and/or her own biases. 3.2A2: When evaluating multiple perspectives or arguments, consideration must be given to how one's own personal biases and assumptions can influence one's judgment. 4.1A7: A line of reasoning is organized based on the argument's purpose. 4.1A8: Claims and supporting evidence are arranged to convey reasoning, or supported in multiple ways depending on audience and context. 4.2A2: Evidence is used to support the claims and reasoning of an argument. Compelling evidence is sufficient, accurate, relevant, current, and credible to support the conclusion. 4.2A3: Evidence is chosen based on purpose. 4.2B1: Commentary connects the chosen evidence to the claim through interpretation or inference, identifying patterns, describing trends, and/or explaining relationships. 4.1A3: Qualifiers place limits on how far a claim may be carried. Effective arguments acknowledge these limits, increasing credibility by reducing overgeneralization or oversimplification. 4.3A1: Plagiarism is a serious offense that occurs when a person presents another's ideas or words as his or her own. Plagiarism may be avoided by acknowledging sources thoroughly and accurately. 4.4A1: Innovative solutions and arguments identify and challenge assumptions, acknowledge the importance of content, imagine and explore alternatives, and engage in reflective skepticism. 4.5A1: When making choices and proposing	guidance and/or discipline-specific knowledge or perspective. Scholars must understand how to seek advice while maintaining self-sufficiency. 3.2A2: When evaluating multiple perspectives or arguments, consideration must be given to how one's own personal biases and assumptions can influence one's judgment. 5.3A3: Scholars are mindful of the rationale behind the chosen method for data collection, information gathering, analysis, production, and presentation. 5.3A4: Scholars reflect on how the inquiry process helped them deepened their understanding, make important connections, and develop greater self-direction. 5.4B2: Communities of scholars produce, present, and perform effectively when participants actively seek and provide feedback. 5.3C1: Reflective scholars explore potential future directions for their inquiries and the development of their own scholarship or bodies of work. 5.3C2: Reflective scholars acknowledge how their inquiry processes and resulting works can be transformational for their own and others' understanding as well as for their personal identities as scholars. 5.1E3: Scholars present, perform, and/or produce their completed work after multiple revisions or rehearsals and polishing. 5.1F2: Scholars effectively articulate the rationale for inquiry choices in relation to the completed work.
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	solutions, the advantages and disadvantages of the options should be weighed against the goal within its context.	
Key Resources	• Lesson PowerPoints • Google Classroom • AP Classroom • Student Samples • AP Academic Paper Scoring Guide	• Lesson PowerPoints • Google Classroom • AP Classroom • Student Samples • AP Oral Defense Questions • AP Oral Defense Scoring Guide

